5.16.65 SAMPLING AND SPLITTING CEMENT TREATED BASE MIXTURES
(Kansas Test Method KT-65)

a. SCOPE

This method covers the procedure for sampling cement treated base mixtures from truck beds, roadways and continuous mix plants.

b. APPARATUS

b.1. Square pointed shovel or scoop.

b.2. Sampling Devices.

b.2.a. A five-gallon container that will be filled with loose, cement treated base mixture. The container should be equipped with a handle that will permit it to be carried easily. The container should also have a lid to prevent moisture loss during transport.

c. SAMPLING PROCEDURE

c.1. Truck Beds.

c.1.a. Divide the truck bed into at least three areas of approximately equal size.

c.1.b. Dig a hole about 1 ft (0.3 m) deep at a point that will be representative of each area.

c.1.c. Take a sample weighing 4 to 6 lb (2 to 3 kg) near the bottom of each hole and place in container, taking care to prevent segregation.

c.1.d. Combine the individual samples into a single sample and mix thoroughly[a].

c.1.e. The combined sample size shall be at least four times the amount required for testing.

Note a: After mixing, place the lid securely on the container immediately following sampling to prevent moisture loss in the material. The lid shall not be removed until the splitting procedure begins.

c.2. Conveyor Belt.

c.2.a. Stop the conveyor belt while the sample increments are being obtained. Insert two templates, the shape of which conforms to the shape of the belt in the mixture stream on the belt. Space the templates such that the material contained between will yield an increment of the required mass.

c.2.b. Obtain at least three approximately equal increments, selected at random, from the unit being sampled.

c.2.c. Carefully scoop all material between the templates into the container and collect the fines from the belt with a brush and dust pan and add to the container.

c.2.d. Combine the individual samples into a single sample and mix thoroughly[a].

c.2.e. The combined sample size shall be at least four times the amount required for testing.

c.3. Roadways Prior to Laydown.

c.3.a. Divide the pile of material in front of paver into at least three areas of approximately equal size.

c.3.b. Dig a hole about 1 ft (0.3 m) deep at a point that will be representative of each area.

c.3.c. Take a sample weighing 4 to 6 lb (2 to 3 kg) near the bottom of each hole and place in container, taking care to prevent segregation.

c.3.d. Combine the individual samples into a single sample and mix thoroughly[a].

c.3.e. The combined sample size shall be at least four times the amount required for testing.

c.4. Roadways Prior to Compaction.

c.4.a. Randomly obtain at least three approximately equal increments from the roadway within the randomly selected truckload. These increments shall be the full depth of the lift, full width of the laydown machine minus 0.6 m (ignore 0.3 m on both edges of the laydown machine) and shall be selected at random. **Remember to add 0.3 m to the centerline measurement of the random calculated width.**

c.4.b. The template shall be inserted through the full depth of the lift and all of the loose material removed from the template. Combine the increments and mix thoroughly.

NOTE: An approximate 300 mm (12 in) square template can be used to obtain the sample. Size and shape of the template can be altered to best fit the required sampling quantity without segregating the material. Take the number of squares required to obtain the necessary quantity for testing.

c.4.c. The sample size shall be at least four times the amount required for testing. For Superpave projects, the minimum sample size is shown in the specifications.

d. SPLITTING PROCEDURE

d.1. Reduce sample to the required size by splitting or quartering in the following manner:

d.2. Spread a sheet of paper (Kraft or similar) on a hard, clean, smooth and level surface. Place the sample in a pile near the center of the paper and mix by alternately lifting each corner towards the opposite corner thereby rolling the mixture to the opposite corner. This should be performed in a vigorous manner. Placing the sample on clean sheet metal and mixing thoroughly with a trowel is an acceptable alternative.

d.3. Divide the pile into four equal quarters with a straightedge (trowel or similar metal blade) and completely remove two pre-selected diagonally opposite quarters.

d.4. Continue this quartering procedure until the original sample is reduced to the approximately desired size. On the final quartering step, if the sample is too large before quartering, but will be too small after quartering, the sample pile is divided into equal opposite sectors but unequal adjacent sectors. This can be accomplished by varying the dividing angle at the center of the sample pile from the normal 90 degrees. Opposite sections can then be selected to obtain the desired sample size.

d.5. During mixing and reducing, care must be exercised to prevent moisture loss within the sample.

NOTE b: The total length of time required to sample and split the material shall take no longer than 45 minutes.